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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,295	12/31/2003	Myung-Keun Yoo	0630-1901P	8428

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EXAMINER	
TILL, TERRENCE R	
ART UNIT	PAPER NUMBER
1744	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	03/27/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/27/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/748,295	YOO, MYUNG-KEUN	
	Examiner	Art Unit	
	Terrence R. Till	1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2 and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Witt (US 1,689,811- cited previously).

3. The patent to Witt discloses a suction head for a vacuum cleaner, comprising: a casing 13 having a suction port (see figure 1) for sucking alien substances from the floor; an agitator roll 19, 20 having an outer roller surface and two ends rotatably installed inside the suction port (see figure 2), a plurality of brushes 19 being arranged on the agitator roll in the length direction; and an agitator driving unit 23-25 connected to the outer roller surface of the agitator roll located between, and separate from, the two ends (see figure 2) for driving the agitator roll to perform reciprocating rotation in a predetermined angle range, the agitator driving unit further comprises: a driving motor 15 for generating a rotational force; and a driving force transmitting unit 23-25 for transforming rotation of the driving motor into rotation of the agitator roll, so that the agitator roll can perform reciprocating rotation in the forward/backward direction in the predetermined angle range. Witt additionally discloses the brushes are evenly arranged at regular intervals in the length direction of the agitator roll and are arranged in rows in the length direction of the agitator roll (see figure 2). Witt further discloses a suction nozzle (defined by casing and suction opening) installed inside the casing, for collecting the alien substances sucked from the suction

port, a volume of which being reduced from the suction port to the opposite side (see figure 2; inlet opening necks down to fan housing 16).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 3-5 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Novinger (US-4,430,768) in view of Johansson (US-4,020,526).

7. The patent to Novinger discloses a suction head for a vacuum cleaner, comprising: a casing 1 having a suction port 10-10 for sucking alien substances from the floor; an agitator 6 rotatably installed inside the suction port, brushes 5 being arranged on the agitator in the length direction; and an agitator driving unit 15-19 for driving the agitator to perform reciprocating rotation in a predetermined angle range. Novinger also discloses a driving motor (column5, lines 8-12) for generating a rotational force; and a driving force transmitting unit 15,16,19,19A,19B for transforming rotation of the driving motor into rotation of the agitator, so that the agitator can

perform reciprocating rotation in the forward/backward direction in the predetermined angle range, a rotary link 15,19B fixed to a shaft and rotated to the shaft; a hinge bracket 19A fixed to one side of the outer circumference of the agitator; and a connecting rod 19 of which an end is hingedly connected to a position of the rotary link eccentric from the rotation center of the rotary link, and another end is hingedly connected to the hinge bracket. Novinger is further considered to disclose a first hinge hole is formed in the position of the rotary link eccentric from the rotation center of the rotary link (where 19B is); a second hinge hole is formed on the hinge bracket (where 19A is); and a first hinge shaft inserted into the first hinge hole of the rotary link is protruded from an end of the connecting rod, and a second hinge shaft inserted into the second hinge hole of the hinge bracket is protruded from another end of the connecting rod, and wherein a first hinge shaft is protruded from the position of the rotary link eccentric from the rotation center of the rotary link; a second hinge shaft is protruded from the hinge bracket; and a first hinge hole into which the first hinge shaft of the rotary link is inserted is formed in one end of the connecting rod, and a second hinge hole into which the second hinge shaft of the hinge bracket is inserted is formed in another end of the connecting rod. Novinger does not disclose the rotary link fixed to the motor shaft. The patent to Johansson shows that a direct connection between the rotary link 18,19 and the motor shaft (see column 2, lines 5-10) directly driving an oscillating agitator 14 (oscillate= move back and forth) is an equivalent structure known in the art. Therefore, because these two drive mechanisms were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute the indirect drive mechanism of Novinger for a direct drive mechanism with the rotary link connected to the motor shaft.

Response to Arguments

8. Applicant's arguments filed 12/27/06 have been fully considered but they are not persuasive.

9. With respect to claims 1, 2, and 6-8 a new grounds of rejection has been made. This new grounds of rejection was necessitated by the amendment of 12/27/06. As such Witt clearly shows the amended language of an agitator driving unit connected to the outer roller surface of the agitator roll located between, and separate from, the two ends for driving the agitator roll.

10. With respect to claims 3-5, the examiner maintained the previous rejection of Novinger in view of Johansson and applicant's arguments will be treated.

11. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, one skilled in the art would immediately recognize the advantage of using a direct drive linkage to reduce the number of parts and reduce the chance of failure.

12. With respect to applicant's argument that Johansson does not explicitly disclose a direct-drive mechanism of a rotary link fixed to a motor shaft of the driving motor and rotated coaxially to the motor shaft, as claimed and that Johansson never shows how his motor. Applicant's say that the electric motor (not shown) is connected to disc 18 and the disc rotates about its center in

the direction shown by arrow A. Although this is not an explicit disclosure that disc 18 is fixed to a motor shaft of the driving motor, it is clear to one skilled in the art that the motor is coupled to the disc directly. Absence of additional language of how the motor might be indirectly connected indicated to the examiner that it is a direct connection. It is appreciated that Johansson does not say the motor directly drives the disc, but some times what is abundantly clear needs no further explanation. The examiner believes this is such a case.

13. With respect to applicant's argument that neither Novinger nor Johansson discloses or suggests a hinge bracket fixed to one side of the outer circumference of the agitator, Novinger clearly does have a hinge bracket (19A) fixed to one side (see figure 7- bracket on end of roller) of the outer circumference of the agitator. This may not be the manner disclosed by applicant, but these features upon which applicant relies (i.e., bracket 113 mounted to exterior of roller surface) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terrence R. Till whose telephone number is (571) 272-1280. The examiner can normally be reached on Mon. through Thurs. and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys P. Corcoran can be reached on (571) 272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Terrence R. Till
Primary Examiner
Art Unit 1744

trt